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(54) **Photoelectric absolute encoder and installation method therefor**

(57) In a photoelectric absolute encoder including a scale(10) having a plurality of tracks (11-13) with different pitch patterns, and a detector (20) having a light source and light receiving elements including a plurality of light receiving element arrays (21-23) corresponding to the plurality of tracks (11-13), a light receiving element array (22') is additionally arranged at a position in the detector (20) corresponding to a boundary between the track having a pattern with a wide pitch and the track having a pattern with a narrow pitch adjacent to each other in the scale, and displacement of the detector (20) relative to the scale (10) in a lateral direction is detected from a signal amplitude (Iamp) of the added light receiving element array (22'). In this manner, displacement of the detector (20) relative to the scale (10) in the lateral direction can be detected.

**Fig.5A**

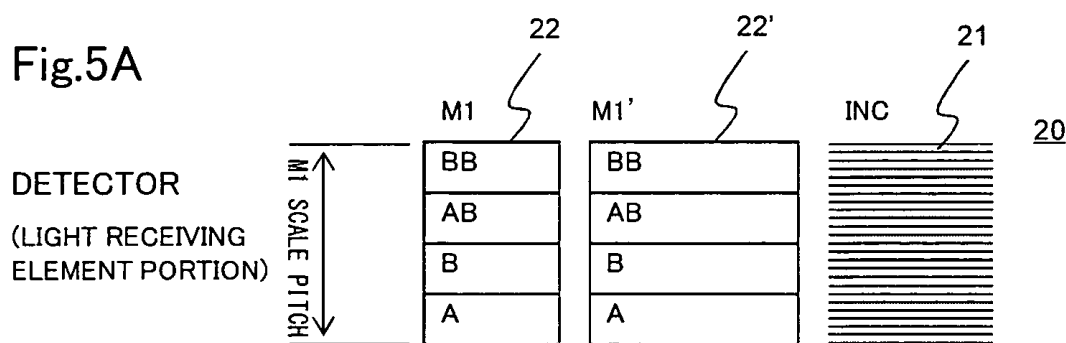


Fig.5B

SCALE

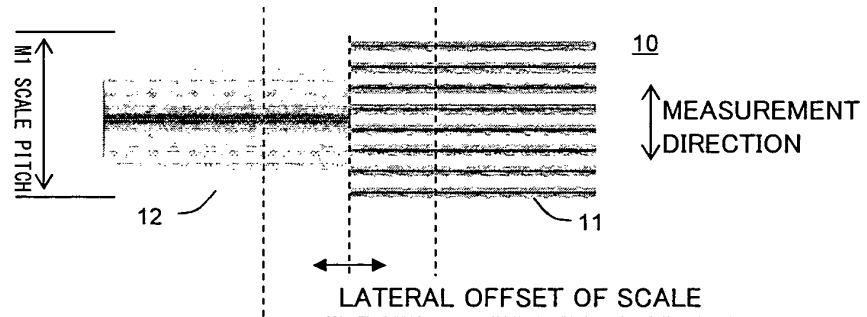
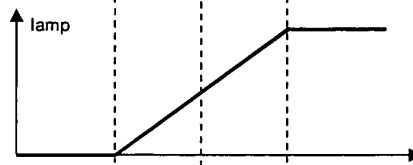


Fig.5C

LATERAL OFFSET  
AMOUNT AND SIGNAL  
AMPLITUDE

M1' AMPLITUDE



LATERAL OFFSET AMOUNT OF SCALE



## EUROPEAN SEARCH REPORT

Application Number  
EP 13 00 5547

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A	* paragraphs [0023], [0024]; figure 5 * * paragraph [0025]; figure 6 *	2,3	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			G01D
Place of search		Date of completion of the search	Examiner
Munich		4 July 2014	Jakob, Clemens
CATEGORY OF CITED DOCUMENTS			
<p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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